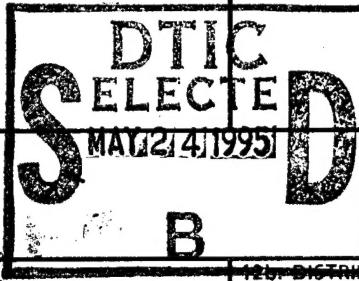


REPORT DOCUMENTATION PAGE

**Form Approved
OMB No. 0704-0188**

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED	
	1986		
4. TITLE AND SUBTITLE		5. FUNDING NUMBERS	
Abstracts of Masters of Military Art and Science (MMAS) Theses and Special Studies 1985-1986.			
6. AUTHOR(S)			
USACGSC, Office of the Director, Graduate Degree Program, 1 Reynolds Ave, Bldg 111, Fort Leavenworth, KS 66027-1352			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)		8. PERFORMING ORGANIZATION REPORT NUMBER	
United States Army Command & General Staff College Graduate Degree Program 1 Reynolds Ave, Bldg 111 Fort Leavenworth, KS 66027-1352			
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
UNITED STATES ARMY COMMAND AND GENERAL STAFF COLLEGE Graduate Degree Program 1 Reynolds Ave, Bldg 111 Fort Leavenworth, KS 66027-1352		 S DTIC SELECTED MAY 24 1995 D	
11. SUPPLEMENTARY NOTES		12a. DISTRIBUTION / AVAILABILITY STATEMENT	
		Approved for public release; distribution is unlimited	
12b. DISTRIBUTION CODE			
13. ABSTRACT (Maximum 200 words)			
This volume brings together all abstracts of Masters of Military Art and Science (MMAS) theses completed at USACGSC during the academic term of 1985-86.			
14. SUBJECT TERMS		15. NUMBER OF PAGES	
		16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT Unclassified

**U.S. ARMY COMMAND AND GENERAL STAFF COLLEGE
FORT LEAVENWORTH, KANSAS**

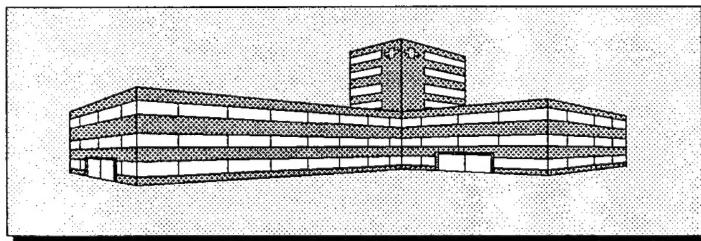
**ABSTRACTS OF MASTER OF MILITARY ART
AND SCIENCE (MMAS)
THESES AND SPECIAL STUDIES**

**ANNUAL EDITION
1985-1986**

U.S. ARMY COMMAND AND GENERAL STAFF COLLEGE
FORT LEAVENWORTH, KANSAS

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AND SCIENCE (MMAS)
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Unannounced	<input type="checkbox"/>
Justification	
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Availability Codes	
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1985-1986
ANNUAL EDITION

THE DEGREE
MASTER OF MILITARY ART AND SCIENCE

On 5 August 1974 legislation was enacted authorizing the U.S. Army Command and General Staff College (CGSC) to award the degree, Master of Military Art and Science (MMAS), an authority originally requested in 1964. The legislation prescribes that the MMAS program require a thesis; also, that the College must attain affiliate or member status with the North Central Association of Colleges and Schools prior to the award of any degree. Included in the statute was authority for retroactive awards to the 182 officers who had successfully completed the MMAS requirements in previous years. On 31 March 1976 the College was granted full accreditation as a masters' degree-granting institution by the North Central Association of Colleges and Schools.

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FOR THE COMMANDANT:

Philip J. Brookes

PHILIP J. BROOKES
Director
Graduate Degree Program

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This edition brings together all abstracts of Master of Military Art and Science (MMAS) theses completed at the U.S. Army Command and General Staff College (CGSC) from 1985-1986. The subject section is designed to fit the areas of research emphasized by the MMAS student. Because of the primary military thrust of the subject matter, headings such as "U.S. Army," "War," or "Combat" have been omitted in favor of more precise captions.

Some titles have been listed in several places in the subject section, as appropriate. The numbers following the subject heading correspond to the titles in the list of theses, by year of completion. Abstracts and the number of pages in the theses are found in the body of the volume.

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The opinions and conclusions expressed in the enclosed abstracts are those of the authors and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other Government agency.

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584. NCO AUTHORITY: ROLES, RULES, AND REGULATIONS: An historical analysis of the relationship between United States Army noncommissioned officer duties/responsibilities and the legal authority to accomplish their mission, by Major John D. Altenburg, USA, 80 pages.

This study focuses on five distinct periods in the history of the United States Army beginning with the Continental Army of 1775-1783 and concluding with the Army of the 1980's. Other periods examined are the Civil War Union Army, the Army in World War I and the Army in World War II. The study considers the changing role of noncommissioned officers as reflected in various military manuals and other publications. The study analyzes legal authority as reflected by contemporaneous statutes and regulations.

Among the conclusions that may be drawn from this study are: noncommissioned officers possessed whatever legal authority their superior commanders deemed necessary during the Revolutionary War and to a lesser degree up to the post World War II period; noncommissioned officer responsibilities have dramatically increased since 1775; appropriate noncommissioned officer authority is crucial to the combat effectiveness of the U.S. Army.

The study concludes that legal authority has always been technically sufficient for noncommissioned officers to meet their changing responsibilities, but that Army policies in the post World War II era have undermined noncommissioned officer authority.

585. AIR FORCE MATERIALS HANDLING EQUIPMENT SUPPORT FOR CIVIL RESERVE AIR FLEET (CRAF) WIDE-BODY OPERATIONS IN WARTIME, by Major Anita Morland Arms, USAF, 94 pages.

This study examines the Air Force's capability to support CRAF wide-body cargo aircraft operations in a high intensity conflict environment. It focuses on the threat to major aerial ports of debarkation (APODs) in a future NATO scenario, describing the vulnerabilities of strategic APODs, as well as the Soviet intent and capability to exploit those weaknesses. It also summarizes Air Force methods for determining materials handling equipment (specifically wide-body aircraft main deck loader) requirements and wartime employment methods. It examines weaknesses that could reduce wartime capability.

The study concludes that MHE is an important part of the airlift capability equation, and that loss of, or damage to, such equipment will reduce U.S. capability to fully utilize the potential of the CRAF cargo fleet, which depends heavily on wide-body aircraft. Finally, the study proposes a series of short and long term solutions which could help resolve the identified short-comings in today's requirements and employment planning process.

586. BATTLEFIELD AIR INTERDICTION IN THE 1973 MIDDLE EAST WAR AND ITS SIGNIFICANCE TO NATO AIR OPERATIONS, by Major Bruce A. Brant, USA, 157 pages.

This study is a historical analysis of battlefield air interdiction during the 1973 Middle East War. Its purpose is to draw conclusions, based on the historical findings, about the best way to employ BAI in the airland battle. Although the conclusions come from a Middle East War over ten years ago, they are examined in terms of the NATO environment.

The tactical and technological developments of both Arab and Israeli air forces during the years 1967-1973 are examined in order to explain how both sides arrived at the doctrine they employed in the 1973 War. The Arabs established an intensive air defense network to deny the Israelis their strongest and most flexible weapons system. The Israelis believed that their Air Force would destroy Arab ground forces as it did in 1967. The confrontation of both doctrines had significant implications for the ground forces particularly the relative value assigned close air support and battlefield air interdiction.

The study concludes that close air support is not the best use of air assets in a high density air defense environment. Battlefield air interdiction is more effective to the operational ground commander. Localized control of air defense systems is needed to allow the use of air-to-ground assets. The final conclusion is that suppression of enemy air defense systems is a joint service responsibility.

587. MILITARY'S PEACETIME ROLE (IMPLICATIONS OF THE CIVILIAN CONSERVATION CORPS EXPERIENCE), by Major Gerald M. Brennan, USAF, 150 pages.

This thesis evaluated the military's role in the Civilian Conservation Corps (CCC), 1933-1942. The purpose of the study was to determine the effects of the military's involvement in the CCC on national defense, on the economy and to deduce a net effect on national power. The study looked briefly at other well known peacetime ventures (Lewis and Clark Expedition, Panama Canal Project, air mail service) in which the military has been involved to see if there were comparable effects. An historical research methodology was used. Facts and expert opinion were gleaned from sources and evaluated to discern effects.

The findings of this thesis were that the peacetime military's involvement in nation building and domestic service programs, especially the CCC, had predominantly positive effects on both the economic strength and the military strength of the nation, and that there was an interactive net positive effect on national power.

In view of the positive impacts of the military's involvement in the CCC and other civilian-like pursuits, this study concluded that the military should have an enunciated dual purpose in peacetime: to provide for the common defense and to promote the general welfare. Finally, it was suggested that a "home-for-the-homeless training and public works program" and a "youth program," involving free technical education, para-military training and conservation work might serve the best interests of the nation today as the CCC did in the 1930's.

588. MANAGING THE NEAR TERM FUNCTIONS OF CHANGE IN MEDICAL UNITS, by Major Ray G. Brueland, U.S. Army, 165 pages.

This thesis attempts to determine the functions of change and the necessary skills required to manage change in medical units. The focus is on the military change agent and his roles within the combat, production, and coordinating/integrating subsystem of the US Army as they related to medical units.

The military change agent is the person or group that is charged with the responsibility to design and implement the change effort. The skills required of this role are introduced and the change process is developed and defined. The thesis explains four management models to explore the complexities involved in change management.

A study of current Army doctrine, procedures, and structures delineates the principles of management that are utilized within the Army System. The Basic Army System Model and the Functional Life Cycle of the Army are explained. Four methods of resolving a perceived discrepancy are introduced in the Army management system. They are a change in doctrine, a change in training, a change in organization design, and finally a change in equipment.

The ten functions of change (system, structure, competency, resources, culture, strategy, staff, dissemination, leadership, and advocacy) are examined by the use of a model. The model is applied to three examples of change which have occurred in medical units. Specific examples highlight, amplify, and offer creditability to the model.

This thesis focuses on the functions of change that must be properly managed for the change effort to be successfully managed in medical units. These functions require that the military change agent possess many skills, which include the ability to disseminate information, a recognition and understanding of the unit's culture, the ability to adopt the role of an advocate, and the maintenance of staff continuity throughout the change effort.

589. BENEFITS OF THE COMPETITION IN CONTRACTING ACT OF 1984 AND SUBSEQUENT PROCUREMENT LEGISLATION. A study of the implementation of the Competition in Contracting Act of 1984 and the circumstances that led to its enactment, by Major Sandra-Faith J. Lamb Bunker, USAR, 181 pages.

This study is a review of the how the Competition in Contracting Act of 1984 evolved from the Armed Services Procurement Act, and how CICA has been implemented. By presenting an historical perspective on competition in Government procurement, and by identifying the salient points of recent procurement legislation [Title VII of the Competition in Contracting Act (CICA) of 1984--Division B (Spending Reduction Act of 1984) (P.L. 98-369), Title VII of the Defense Procurement Reform Act of 1984 (P.L. 98-525), Titles III and V of the Small Business and Federal Procurement Competition Enhancement Act of 1984 (P.L. 98-577), and Title IX of the Defense Procurement Act of 1985 (P.L. 99-145)], a base is established from which to view implementation of new procurement provisions.

The role of the Competition Advocates General is discussed, and implementation of the provisions of CICA and subsequent legislation by each of the services is explored. The views of industry on key issues surrounding competition are established, and compared with those enunciated by the services. Actions of both industry and Government to live with the competition requirements are reviewed.

Conclusions are then drawn that the inherent advantages of full and open competition in a free enterprise system are substantial, and that the basic intent of the procurement law demanding that competitive procedures be used is sound and long overdue. Also noted are equally significant disadvantages to the extensive Congressional oversight of defense acquisition, resulting in over-legislation in the procurement area, as well as increased administrative burdens and costs.

Finally, recommendations for further study are made in the case of weapons systems guaranty/warranty and spare parts management.

590. GUNNERY TRAINING STRATEGY FOR A BRADLEY (M2)-EQUIPPED INFANTRY SQUAD, by Major Patrick W. Casey, U.S. Army, 254 pages.

This study determines the most effective and efficient gunnery training strategy for an infantry squad equipped with an M2 Bradley Infantry Fighting Vehicle (BIFV). The study initially focuses on a review of the training

strategies employed by US armored infantry and mechanized infantry units since World War II. Further investigation is conducted to explain the present US Army training strategy development process, as well as the emerging Force Integration doctrine; and their implications for BIFV gunnery training. The study analyzes the US Army Infantry School's (USAIS) doctrinal BIFV vehicle crew-oriented gunnery training strategy, and relates it to the non-doctrinal gunnery training strategies actually employed by BIFV units in CONUS and USAREUR.

Research revealed that the armored infantry training strategy definitely favored the use of unit integrity to build combat ready squads. Paradoxically the USAIS chose to initiate a gunnery training strategy based on the BIFV crew. However, BIFV units have experienced more accurate gunnery results with a squad-based gunnery training strategy that fosters unit cohesion. Analysis points to a conclusion that the cohesion, gained through squad gunnery, acts as a synergistic catalyst resulting in more capable BIFV squads. The study recommends the USAIS adopt a doctrinal squad-based BIFV gunnery training strategy; and lists the methodology for implementation of the new strategy.

591. A STUDY OF SOVIET USE OF FIELD ARTILLERY WEAPONS IN A DIRECT FIRE ROLE, by Major Larry W. Coker, Jr. USA, 102 pages.

This study is a detailed look at the information available in current Soviet military publications on how the Soviets use their field artillery weapons in a direct fire role. It includes a discussion of the historical background for use of direct fire as it was developed during the Great Patriotic War. The primary emphasis is on how the Soviets currently employ direct fire during offensive and defensive operations, and the training techniques used to develop direct fire skills at individual and collective levels.

The conclusions drawn from this study are that the Soviets will aggressively use their field artillery in a direct fire role in both offensive and defensive situations, but most routinely in the meeting engagement; the major advantages for the use of direct fire are timeliness, accuracy, and ammunition savings; routine training is conducted by Soviet artillery units to develop their fire skills; and the Soviets' significant numerical advantage in artillery assets allows them the flexibility to employ it for direct fire.

592. MANAGEMENT VERSUS LEADERSHIP AS REFLECTED IN SELECTED MILITARY JOURNALS (1970-1985), by Major John R. Combs, USA, 93 pages.

This thesis determined if selected military journals emphasized a traditional style of leadership in contrast to a managerial style of leadership during the period 1970 to 1985. A content analysis of five selected military journals was undertaken to determine if any trends in leadership philosophy were demonstrated during the period. The content analysis was performed on the following journals: Parameters, Military Review, Infantry, A LOG (formerly Army Logistian), and Armed Forces Journal.

The results of the content analysis revealed that the advocacy of writers shifted from a high percentage of traditional leadership articles in the early portion of the analysis, 1970-1972, shifting toward an advocacy of managerial style of leadership in the 1973-1979 time period, and finally an ascendancy of traditional leadership articles during the latter portion of the study, 1980 to 1985.

The research postulated that the shift in advocacy from traditional to managerial leadership emphasis during the earlier period of the study was a result of both internal and external factors. A key factor was that

managerial leadership models offered some rational hold over the ambiguity evidenced by more traditional leadership models.

The research indicated the ascendancy of traditional leadership advocacy beginning in 1981 and continuing to the end of the period studied. Once again, both internal and external factors influenced the shift of advocacy.

593. THE EVOLUTION OF THE CHINESE ARMAMENTS INDUSTRY FROM 1860 TO PRESENT: The Search for Self-Sufficiency, by Major Donald A. Green, USAR, 105 pages.

In attempts to increase their military strength during the last hundred years, Chinese leaders have been faced with a whole series of grave problems. These have included industrial backwardness, poverty, illiteracy, political decentralization, nepotism, a shortage of qualified officers and opposition to change. There is a close relationship between the political, social, and economic structure of a civilization and the armed forces which it develops. An industrial foundation is essential to the maintenance of an effective army, while the size and equipment of the armed services ultimately depend on the ability of the economy to finance.

The purpose of this study is to follow the continuing search for self-sufficiency in economic and military power by Chinese governments from the declining Ch'ing dynasty of the 1860's to the Communists at the end of the Korean War. In modern times a nation's power to wage war has come to depend increasingly on an efficient mobilization of her economic resources.

594. LOW INTENSITY CONFLICT AS PRACTICE BY JOHN SINGLETON MOSBY IN THE AMERICAN CIVIL WAR, by Major Rick Gutwald, USA, 177 pages.

This study is an historical analysis of three Civil War partisan (insurgent) operations conducted by the 43d Battalion, Virginia Cavalry and its Confederate leader, John S. Mosby: the raid on Fairfax Court House, 8-9 March 1863; the attack on Loudoun Heights, 9-10 January 1864; and the Berryville raid, 13 August 1864. Each operation is analyzed by using the following factors: situation and organization; mission and planning; execution of the operation; equipment and logistics; communications, command and control; results; the element of chance; and leadership. In addition, Mosby's background and character are also discussed and analyzed.

Among the many conclusions that could be drawn from this study are: intelligence is paramount to a partisan unit's survival; partisan activities are not always acceptable to its supporting government; Civil War partisan operations are characterized by simple mission orders, hit-and-run tactics, surprise, stealth, speed, deception, and audacity; and partisan operations have the potential to physically and psychologically affect all levels of the enemy's government.

The study concludes that partisan warfare is still viable today and that the U.S. Army should expand its focus to include its use.

595. MIDDLE EASTERN STRATEGIC DEPLOYMENT--OASIS OR MIRAGE? By Major Stephen B. Howard, USA, 145 pages.

This study assesses the feasibility of the United States deploying its planned military forces for the protection of its national interests in the Middle East, within time constraints previously established in our Southwest Asian contingency plans. The actual deployment feasibility was determined based upon comparisons of historical and current-day, transportation-related problems, which have been encountered during actual and exercise-related strategic military deployments. Past deployments by the United States to Europe in 1944 (Normandy Invasion), to Lebanon in 1958, to Grenada in 1983,

and by the United Kingdom to the Falkland Islands in 1982, as well as recent Joint Readiness Exercises, were analyzed. Thus, common transportation-related problems served to identify the general causes for delays in the smooth movement of American military forces.

This study identified three consistent causes of delays in strategic deployments: (1) Lack of adequate deployment training, (2) Inadequate coordination of operational requirements, and (3) Failure to execute specific details in pre-established contingency plans and procedures.

The study concludes that the United States is not capable of successfully deploying its combat forces to the Middle East within the time schedules contained in our current contingency plans. This lack of force projection capability is attributed to delays which will be encountered because of unanticipated transportation-related problems. This study cites a weakness in the structure of Army and Joint Commands at Division level and above. The weakness, as identified, shows that the contingency planning function is separated from contingency execution/operations functions within these command structures.

596. THE F111D RETENTION ISSUE, by Major Michael G. Hub, USAF, 166 pages.

This study provides historical information on the F-111D in 1979 and 1980, the time period critical to the retention of the aircraft in the Air Force inventory. It serves as a case study focusing on those responsible for the management of the F-111 system and how they retained an aircraft that appeared ready for retirement. Three research questions were addressed: (1) What maintenance and logistics factors contributed to the retention of the F-111D? and (2) What management actions and operational accomplishments contributed to the retention of the F-111D? and (3) Did the F-111D fit the "traditional" mission role of the F-111 during this period, and did this play a role in the retention issue?

Research on this topic centered on the Histories of the 27th Tactical Fighter Wing, the only wing equipped with the F-111D. The historical data indicated that a supply deficit was the principle logistics factor effecting the retention of the F-111D. Management initiatives by the Air Staff and the Tactical Air Command helped pin-point the reasons for the supply deficit. Following reorganization in January 1980 and 27th Tactical Fighter Wing demonstrated its maintainability and combat capability during a deployment to England in May and June 1980 which closed the retention issue. Finally, the study showed that the F-111D did not fit the traditional role of the F-111 during this time frame.

597. A MODEL TO ESTABLISH THE EFFECTIVENESS OF A MIXED FORCE OF HIGH AND LOW COST FIGHTERS FOR THE DEFENSIVE COUNTERAIR MISSION, by Major Terry V. Jackson, USAF, 97 pages.

This study examines the concept of a mixed fighter force as an alternative force structure for the defensive counterair mission of the U.S. Air Force. With budget constraints, the goal of 40 tactical fighter aircraft wings may be in jeopardy. If a mixed force of high and low cost fighters could be as effective as a high cost only force, then it would be a viable solution.

Five aircraft, the F-15, F-16, F-20, F-5, and F-4 were evaluated. Performance criteria were established and life cycle cost was determined for each aircraft. The F-15 was established as the standard since it achieved the highest performance rating. Finally, aircraft mixes were compared to the standard.

Results indicated that a mixed force could be as effective as a high cost only force. The F-15/F-20 and F-15/F-5 mixes outperformed the standard. When compared one-to-one, neither the F-20 or F-5 could match the F-15, but because of their lower life cycle cost, more total aircraft could be purchased. This resulted in an overall improved performance capability, thus demonstrating the validity of a mixed force for the defensive counterair mission.

598. KNOW YOUR ENEMY: A Comparison of a Soviet Motorized Rifle Regiment and the Opposing Forces (OPFOR) Motorized Rifle Regiment, by Major Robert L. Jordan, Jr., 87 pages.

This study attempts to identify the major organizational and equipment differences between a Soviet Motorized Rifle Regiment and the OPFOR Motorized Rifle Regiment. Analysis also includes basic tactical doctrine at the regimental level. Research indicates there are significant differences between the two organizations in regard to organizational structure and equipment appearance and capabilities. Analysis of tactical doctrine and employment does not reveal any significant differences.

599. FORCE INTEGRATION DOCTRINE AND DIVISION STAFF ORGANIZATION, by Major Douglas R. Jolley, USA, 140 pages.

Over the past several years the Army has experienced difficulty in managing the introduction, incorporation and sustainment of new doctrine, organizations and equipment. Especially hard pressed were the Army's divisions, faced with assimilating these changes without disrupting day-to-day training and sustainment operations. In 1985, guidelines were published in FC 100-11: Corps/Division Force Integration to assist division commanders and their staffs in accomplishing this difficult task. Force integration is a comprehensive, logical way to view, plan for, implement and sustain change. It allows a division to gain control of, and efficiently implement change with minimal disruption to current operations and capabilities.

The division staff plays a crucial role in the force integration process by synchronizing the broad range of agencies and actions that are involved. Many of the problems experienced by divisions early on were a result of poor staff performance due in part to structural shortcomings. Because of this, most divisions have made adjustments to the general staff organization to facilitate staff efforts in managing and integrating change. This study examines those shortcomings and remedies.

600. THE KENYA-SOMALI BOUNDARY DISPUTE. A dispassionate survey of the border dispute between Kenya and Somalia by Major Jeremaih M. Kianga, Kenyan Army, 140 pages.

Since Kenya's independence some twenty-three years ago, there has been tension and conflict with the Republic of Somalia over the sovereignty of the Northeastern area of Kenya (formerly called the Northern Frontier District) which Somalia claims to be her own territory on ethnic grounds. This claim has led, over the years, to sporadic fighting in the North Eastern Province of Kenya between Somali sponsored insurgents and Kenya's military forces. This study relates an historical narrative of the border's evolution through treaties, outlines the technical problems involved in border issues, evaluated the basis of Somalia's territorial claims and reviews the prospect for settlement of the border dispute between the two countries.

It concludes by highlighting the changing political realities in the region which are causing the two countries to improve their relations bringing the border dispute close to full resolution.

601. ESTABLISHMENT AND EVOLUTION OF TACTICAL AIR FORCE WEAPON SYSTEM EVALUATION PROGRAMS: COMBAT SAGE, COMBAT ECHO, AND COMBAT ARCHER, by Major Daniel P. Leaf, USAF, 128 pages.

This study examines the evolution of Tactical Air Force (TAF) Weapon System Evaluation Programs (WSEPs). The first WSEPs were short-duration programs, SPARROW SHOOT and CHARGING SPARROW. Pacific Air Forces' COMBAT SAGE was the first permanent TAF WSEP, followed by Tactical Air Command's COMBAT ECHO. COMBAT ECHO became COMBAT ARCHER when it merged with an interceptor WSEP, COMBAT PIKE. All of the TAF WSEPs have had two objectives: evaluation of air-to-air missile capability and training for associated personnel.

The purpose of the thesis is to demonstrate that TAF WSEPs contributed to improved combat capability of Tactical Air Force aircraft, weapons, and aircrews. The study includes an examination of the reasons TAF WSEPs were initiated with emphasis on combat results from Southeast Asia. The results of the early WSEPs, and their impact on later combat experience, are discussed. Evolution of the programs after the war in Vietnam is related to the advances made in aircraft and weaponry and specific contributions of WSEP to TAF combat capability are detailed. However, there are several limitations and shortcomings in WSEP, and those are covered in the thesis.

The author found that the air-to-air WSEPs provide important aircrew training that cannot be achieved in other programs. More importantly, WSEP evaluation continuously updates information on system capability, identifies and verifies problem areas, and is the forum for validating solutions to those problems. WSEP contributed to improved missile results in Vietnam and better combat readiness after the war. However, WSEPs are costly programs and increasing threat and weapon system capability has complicated the task of providing realistic training.

In summary, WSEPs are a crucial part of Tactical Air Force readiness. COMBAT SAGE and COMBAT ARCHER face significant challenges in the future, but remain a vital aspect of TAF training and evaluation.

602. SOVIET MILITARY INTERVENTION IN AFGHANISTAN AND POLICY OPTIONS FOR PAKISTAN: A Study of Pakistan's Dilemmas and Options in View of the Soviet Presence in Afghanistan, by Major Manzoor Iqbal Awan, Pakistan Army, 88 pages.

This study focuses on the causes of the 1979 Soviet intervention in Afghanistan, ripples created by the intervention, and policy options available to Pakistan to vitiate their effects. It uses the historical method of research to establish the pattern of Soviet behavior over the centuries.

The study concludes that the intervention fits well into the expansionist pattern displayed by the USSR over the years; that the mover was facilitated by the prevailing global situation; that the outcome of Soviet efforts to pacify Afghanistan will be determined not only by the resolve of the Afghan people, but also by the policies of the regional countries and the Western world, especially the United States; and that time is on the side of the Soviet Union. The study further concludes that there is no immediate likelihood of the Soviets moving further south; that a step in that direction, whenever it materializes, is more likely to come through Pakistan than Iran; and that India would like the continued existence of an independent but weak Pakistan. It also concludes that Pakistan may not be able to endure Soviet pressure in the absence of support from its friends in the Islamic world and the international community; and that Pakistan has little option other than avoiding alliances and following strict neutrality.

603. THE HISTORY OF THE MARINE CORPS INSTITUTE, by Major Hugh M. McIlroy, Jr., USMC, 121 pages.

This study is an historical analysis of the evolution of the Marine Corps Institute from its beginning in 1920 until early 1986. The major events that occurred and affected the evolution of the Marine Corps Institute are described and analyzed to provide a detailed chronological history.

The author researched all available information and data that existed in magazines, newspapers, government documents, books, and theses to compare and analyze date and information and reported events that were established by a preponderance of the available evidence.

The conclusions which can be drawn from this study are: the wisdom and vision of Major General Lejeune and Brigadier General Butler were instrumental to the success of the Marine Corps Institute; the overriding theme in the success of the Marine Corps Institute is the leadership philosophy of Major General Lejeune that is based on the importance of the individual Marine; and that by providing for the welfare, training, and morale of the individual Marine, a strong and capable Marine Corps is created that will provide for the security of the nation.

604. AN ANALYSIS OF THE ARMY OF EXCELLENCE HEAVY DIVISION CAVALRY SQUADRON: An evaluation of the J-series Table of Organization and Equipment (TOE) Cavalry Squadron and its ability to support the heavy division in its conduct of the Airland Battle, by Major Scott F. Miller, USA, 140 pages.

The purpose of the study was to determine whether the role assigned to the Army of Excellence (AOE) heavy division cavalry squadron is doctrinally sound in the context of the Airland Battle. First, the doctrinal or stated role of the AOE heavy division cavalry squadron was defined. Next, the requirements created by AirLand Battle for AOE cavalry were determined. Several conflicts existed in the definition of the stated role, the difference between the stated role and AirLand Battle requirements, and the ability of the AOE squadron to perform both its stated role and fulfill Airland Battle requirements. The German World War II cavalry experience was briefly analyzed to determine if any lessons learned could be applied to the AOE squadron. Finally, the H-series TOE, The Cavalry/Scout Study, and the Air/Ground Cavalry 1980-1985 Study were examined to determine if any parts were still valid.

The study makes several conclusions: (1) Training and Doctrine Command has failed to clearly define the doctrinal role of the AOE squadron, (2) this role is to perform reconnaissance, surveillance, and screen in support of the heavy division, (3) AirLand Battle doctrine will require the squadron to perform this role as well as perform the security mission of guard, and (4) the AOE squadron cannot adequately perform either its doctrinal role or fulfill necessary AirLand Battle requirements.

The study makes several recommendations to clarify and modify the role of AOE cavalry, as well as recommendations for additional testing to refine/validate the mission, capabilities, and organization of the AOE squadron.

605. DENTAL READINESS CONTINGENCIES: SUPPORTING THE AIRLAND BATTLE, by Major William C. Mitchell, USA, 73 pages.

This study examines dental readiness as it relates to Airland Battle doctrine. Dental readiness is evaluated in terms of dental work load, training, equipment and logistics using a generic scenario for a Corps in the defense.

The study reveals the importance of improving dental fitness Army-wide, during peacetime, in order to sustain soldiers in combat. Oral health commensurate with the Health Services Command's goal of supporting nine to twelve-month troop deployability contingencies is not possible without a policy to get soldiers fit to fight in advance of hostilities. Training dental personnel in their alternate wartime roles requires close cooperation with Medical Activities and continual command emphasis in order to be successful. Lastly, this study concludes that, while dental equipment is available to support the AirLand Battle, it is logically very resource intensive. Recent advances in technology, however, provide the Dental Corps with new lighter weight equipment alternatives.

606. THE CAUSES AND COSTS OF MODIFICATIONS TO MILITARY CONSTRUCTION CONTRACTS, by Major Eric T. Mogren, USA, 199 pages.

This study identifies the causes and costs of changes to military construction contracts and discusses how excessive project cost growth can be reduced by thorough constructibility, using service and technical design reviews.

Twenty-five military construction projects, administered by the Corps of Engineers, were identified for study. Project files were reviewed to determine the reasons for the costs of 778 items of change contained in 268 modifications. Project cost growth was correlated by reviews conducted, project size, project type, and design agency. The study found the major causes of mods to be design deficiencies, user requested changes, and unknown site conditions. Most design deficiencies were found to occur in architectural aspects of design, followed by the mechanical, then electrical design disciplines.

The study further found that projects receiving technical, constructibility, and using service reviews had significantly lower overall cost growth than projects not receiving all three reviews. However, the lack of any one review could lead to cost growth increases regardless of the detail in which the remaining reviews were conducted. Less expensive OMA and AFH projects tended to have higher cost growth rates than more costly MCA projects, apparently due to the higher priority given to design and review of large projects. In-house designs were found to have lower cost growth than designs by contracted private A/E firms largely due to greater problems with unknown site conditions experienced by A/E designed projects.

The study also examined the District's design review system. Information on reviewer training and experience, time available, and review procedures were collected by questionnaire. It was found that the primary reason for poor quality reviews was lack of time, brought about by competing work requirements.

The findings of this study were compared with the findings of 16 related works in order to evaluate the external validity of the results. A strong correlation between most of the findings was found to exist, particularly in the areas of modification causes and the effect of good reviews on cost growth reduction.

The study concludes that the major causes of modifications to military construction projects are design deficiencies, user requested changes, and unknown site conditions. Thorough design reviews can decrease the rate and cost of modifications in these areas. Reviews must be properly managed, however, to insure they receive the priority needed to be effective.

607. ARMS CONTROL: SHAPING THE ARMY'S EUROPEAN NUCLEAR ARSENAL, by Major Alan B. Moon, USA, 88 pages.

This study determines how and why the U.S. Army's European nuclear arsenal has been impacted on by arms control issues and decisions from 1965 to 1985. Specifically, fluctuations in the European nuclear stockpile are examined for arms control's impact. This is done by documenting and analyzing stockpile changes in relation to arms control events. Additionally, the nuclear stock-pile levels in Europe are contrasted to the nuclear warfighting requirements with the disparities analyzed to determine arms control relationships.

Several conclusions are put forth by this study. The Pershing II missile system was deployed to Europe, in part, as a reaction to SALT agreements. By retention of obsolete and militarily useless nuclear warheads, the Army's European nuclear stockpile is shown to be held at levels above wartime requirements for the purpose of gaining bargaining positions at arms control negotiations. The announced nuclear stockpile reductions in Europe during the late 1970's and early 1980's were motivated by arms control considerations.

This study concludes with the recommendation that the Army's nuclear stockpile in Europe be structured to accommodate both the military requirements and the realities of arms control negotiating positions.

608. TANK GUNNERY: A COMPARISON OF EVALUATIONS, by Major Kurt D. Norman, USA, 223 pages.

This study examines two tank gunnery evaluation procedures used by armor units in the U.S. Army stationed in Germany. The two evaluation procedures involved are tank crew qualification (Tank Table VIII) and platoon battle run exercises (Canadian Army Trophy). The study compared training techniques and scoring data for both evaluation procedures. In addition, a survey was developed and distributed to armor unit commanders and their operations officers stationed in Germany to ascertain what procedure is currently being emphasized and what procedure should be implemented in a tank gunnery program for the armor force.

The study found that there were no major differences in the manner in which units prepared for their particular evaluation exercise. In addition there was not any significant difference in the comparisons of scoring data. Finally, the survey determined that crew-level evaluations received emphasis in armor units stationed in Germany. The survey also determined that the respondents preferred that the tank gunnery program maintain its current focus of emphasis on the tank crew while maintaining the battle run exercise as a training vehicle.

The study makes several recommendations on what evaluation procedure should receive emphasis and what procedure is the most effective for armor units to prepare for combat. Finally, the study points to several areas of future research that would benefit the U.S. Army's current tank gunnery program.

609. MILITARY RULE IN NIGERIA: The Economy and Foreign Policy, by Major Elias J. B. Nyan, Nigerian Army, 115 pages.

This study addresses selected aspects of military rule in Nigeria from independence to the present. It examines the structural dilemmas of Nigeria's political and military history that have fostered military intervention into government, and some of the reasons for extended military rule during Nigeria's 25 years of independence. The full array of topics usually associated with military rule are not addressed, but instead, this study

narrowly focuses on the Nigerian economy and foreign policy as the two most dominant factors leading to military intervention into politics and then traces subsequent changes to these two spheres of government under military rule. In this regard, this study is a reconsideration of cause and effect.

The study is concluded with observations of the military government disengagement process. An analysis of Nigeria's latest and short-lived return to civilian rule in 1979 is undertaken in this portion of the study.

610. IS THE TACTICAL AIR FORCE PREPARED FOR NIGHT CLOSE AIR SUPPORT? by Major William E. Rial, USAF, 112 pages.

The Soviet forces in Europe have dramatically modernized their equipment and are the most heavily armed in the world. The United States tactical air force has responded with increased emphasis on readiness and realistic training. This thesis addresses the relevancy of night close air support training by focusing on the historical development of the Air Force capability to support the land battle at night, the current fighter force night training requirements and the equipment available to conduct night close air support missions.

The general conclusion of this study is that the current combat training of United States tactical air forces requires additional emphasis and improvement in its capability to attack enemy forces in close proximity to friendly forces at night. In light of the increasing threat from Soviet forces, a reevaluation of night close air support training is required.

While technology exists to improve the capability of the U.S. tactical air force, equipment currently employed in operational aircraft is not being effectively employed. Additionally, tactical fighter pilots are not adequately trained for the night close air support mission.

611. AFRICAN MILITARY CAPABILITIES -- EVOLUTION AND IMPLICATIONS, by Major Richard M. Saunders, USA, 115 pages.

This study assesses the effect of the growth of national military establishments and the spread of modern weaponry in sub-Saharan Africa on military capabilities and the nature of actual and potential military conflict in the region. It also analyzes the influence of indigenous military power on the ability of the United States to protect its security interests on the continent.

The study evaluates military capabilities in Africa by examining the size, force structure, and armament of African military establishments and evaluating the performance of African armies in actual combat. This latter analysis is conducted through two case studies -- the Ogaden war and the Tanzanian invasion of Uganda. These conflicts demonstrate the ability of African armed forces to translate military resources into actual combat capabilities.

The study concludes that Africa is becoming increasingly militarized. Armies are growing larger and are obtaining significant amounts of sophisticated weaponry. Although severe readiness and sustainability problems exist, a few African nations are gaining the means to engage in conventional armed conflict and to project military power into neighboring states. As a result, the costs and risks of efforts by non-African states to influence events on the continent through military means have increased. These changes in the African military environment have significant implications for U. S. regional security policy and security assistance programs.

612. PRINCIPLES OF INSURGENCY AND COUNTERINSURGENCY, AND SUPPORT IN COUNTERINSURGENCY TO A DEVELOPING NATION: by Colonel Tejindar Singh Shergill, Indian Army, 136 pages.

Beneath a nuclear umbrella insurgency has proliferated amongst the developing nations of the world. Insurgency if unchecked poses a threat to the stability of the world. To maintain stability, developed nations might have to support developing nations to combat insurgency. This support should be based upon common principles of insurgency, counterinsurgency and counterinsurgency support to the host nation.

Using the principles of revolutionary warfare evolved by the British Staff College, Camberley, the author has examined the validity of those principles. He had found that the insurgent does not have complete control over the subjective principles such as cause, popular support, leadership, external support, and creation of an alternate society. However, the insurgent does have initiative in the objective principles of choice of terrain, engaging in protracted war, and gaining intelligence.

The author is of the view that principles of counterinsurgency should be mainly objective in nature but directed towards attaining the subjective principle of popular support. The author feels that, as insurrections are of long duration, an early enunciation of the national aim to deal with the problem, planning and organization for a long term perspective, and harnessing the total potential of the country as a national approach is essential for quicker counterinsurgency success. He stresses that insurgents should be isolated in order to bring them back to democracy.

In providing counterinsurgency support to a host nation, the author feels that the aiding nation should first analyze the principles of insurgency and counterinsurgency in operation in the host nation. He has explained that enduring common interests, national will, and minimum visible support are necessary principles to be followed in host nation counterinsurgency support.

The author has arrived at the principles of insurgency, counter-insurgency and counterinsurgency support to a developing nation through a process of historical analysis. The author accepts that the principles are not exhaustive to cover all insurrections, yet they serve as a basis for actions by the counterinsurgent.

613. FIELD MARSHAL VON MANSTEIN'S COUNTEROFFENSIVE OF ARMY GROUP SOUTH, FEBRUARY-MARCH 1943: THE LAST OPERATIONAL LEVEL VICTORY OF THE PANZER FORCES ON THE EASTERN FRONT: A historical analysis of Field Marshal von Manstein's counteroffensive in southern Russia in February-March 1943, by Major David A. Shunk, USAF, 70 pages.

This thesis is a historical examination of the eastern front battles in southern Russia during February-March 1943. Field Marshal von Manstein, Commander of the German Army Group South, defeated a Soviet two-front offensive with an exceptional counteroffensive. Von Manstein's counter-offensive concentrated all the available panzer (armor) and mechanized infantry divisions into two attack groups. Von Manstein then attacked the Soviets, after they had exhausted their offensive, with a double envelopment counteroffensive which destroyed two Soviet armies and regained the initiative for German forces in southern Russia.

The following is a selection from the many conclusions. The Soviet General Staff, Stavka, over extended their forces, under estimated the German counteroffensive ability, and reacted very slowly to von Manstein's counter-offensive. Von Manstein concentrated all the available German mobile forces for a battle of maneuver, fought a combined arms battle, and surprised the Soviet forces as to the time and place of the counteroffensive.

This study concluded that von Manstein developed and executed a brilliant counteroffensive in the midst of a Soviet offensive. Due to Hitler's restrictions on maneuver warfare, the declining German forces, and the improving Soviet forces, this was the last operational level victory for the German panzer forces on the eastern front.

614. RESPONSIBLE SOLDIERING IN THE NUCLEAR AGE: INFERENCES FROM THE CATHOLIC BISHOP'S PASTORAL ON NUCLEAR WAR, by Lieutenant Colonel Mason E. Smith, USA, 72 pages.

This study is an attempt to develop an ethic for those who must perform soldierly duties in this era. It is an examination of core values, and how these values have been translated into military ethics and obligations within the context of western civilization.

This study uses the most recent application of just war theory, the Catholic Bishop's Pastoral on nuclear war, The Challenge of Peace: God's Promise and Our Response, and compares its instruction to selected findings of another contemporary application, the Nuremberg War Trials. The manner in which we construct and reinforce our moral values in conscience, coupled with appreciation for the sanctity of human existence, evolve as fundamental under-lying principles. After having established the scope of authority from which the Catholic Bishop's Pastoral derives its credibility, these principles are compared against the United States Army Ethic and a contemporary ethic is proposed.

The study concludes that ultimately we are responsible for the decisions and choices that we make. Soldiers are not absolved, especially within the Judeo-Christian context, from the obligation to make choices based upon sound moral reasoning, simply because they are engaged in activities which run against the grain of orderly human existence. In fact, because of the nature of soldierly obligations, the soldier's standard may be more stringent. If the foregoing logic holds, then a soldier must expect to be provided a guide or set of standards against which he can measure his contemplated action in the potential to actual nuclear environment. That set of standards, or code of ethics, in order to be truly professional, must allow for rule of conscience and assume a relationship which transcends national institutional and territorial integrity.

615. ELECTRONIC WARFARE IN SUPPORT OF THEATER AIR DEFENSE COMMAND--EUROPE, by Major Douglas E. Sturgeon, USA, 101 pages.

This study analyzes the potential application of electronic warfare to the air defense fight, as a component of the Airland Battle, of the Theater Air Defense Command in Europe against the Soviet threat. The study formulates a U.S. air defense operations and Soviet air operations model, then interacts the two models with the framework of a European scenario. The analysis consists of identifying, as a product of the modelling, the potential applications for electronic warfare. These applications are then viewed in the context of the tenets of Airland Battle doctrine and Intelligence and Electronic Warfare (IEW) to validate them as requirements. The requirements are compared with existing capabilities to determine shortfalls, and thus the conclusion arrives at the requirements for electronic warfare in the air defense battle and the advantages accrued.

This study is a suitable starting point for additional study in the technical requirements resulting from this operational concept.

616. EQUIPPING THE INFANTRY DIVISION (LIGHT) IN THE 1990's, by Major Su Poon Shee, Singapore Armed Forces, 171 pages.

The U.S. Army Infantry Division (Light) will transform the American approach to the use of force in Third World conflicts during the 1990's. As the mainstay of strategic U.S. conventional reserves, the Infantry Division (Light) was designed to deter and fight low to mid-intensity wars effectively at a tolerable cost and risk. Theoretically sound, the current Infantry Division (Light) may not be able to accomplish its assigned missions.

This study critically examines the impact of threat, military strategy and its revised missions, and emerging technologies on the equipment requirements for the Infantry Division (Light) in the 1990's. Besides the predictive use of "expert" judgments from certain definitive works on infantry, the study also uses an historical approach to compare and contrast contemporary infantry equipment requirements. The resulting synthesis provides valuable insights into the future battlefields, as well as the roles and equipment for light infantry forces.

The study concludes with a recommended list of equipment changes which could make an "order-of-magnitude" difference in the overall performance of the Infantry Division (Light).

617. THE UNCONVENTIONAL THREAT TO THE CENTRAL ARMY GROUP WITHIN ALLIED COMMAND, EUROPE, by Major George M. Svitak, USA, 103 pages.

This study is an examination of the threat posed by unconventional forces of the Soviet Union/Warsaw Pact (Spetsnaz and agents) and terrorist groups against critical targets located within the CENTAG rear area. Each category of threat forces are examined in light of an historical analysis on their past activities, current operational capability within the CENTAG area and projected ability to interdict critical targets in the future. Critical targets are defined as those systems located within the CENTAG rear area that pose the most formidable obstacles in terms of the Soviet/Warsaw Pact's ability to achieve victory against the NATO alliance or, in the case of terrorists groups, key targets that are symbolic of their cause. The critical targets are: Theater Nuclear Forces operating in the area; key command, control and communications headquarters; air defense systems; and military and political leaders. The significance of the targets is indicated by doctrinal support and demonstrated ability of the threat forces to obstruct these targets. A recent case study is used to demonstrate their ability to attack these targets, and a hypothetical scenario is presented to show the possible synergistic effect of these forces when operating together.

Among the conclusions that can be drawn from this study are: The unconventional forces of the Soviet Union and Warsaw Pact constitute a formidable rear area threat against US/NATO forces operating in the CENTAG area; Soviet/Warsaw Pact doctrine establishes rear area interdiction as a high priority if the main effort against the NATO alliance is to succeed; the CENTAG rear area contains numerous lucrative targets that are the first priority for elimination by Soviet/Warsaw Pact unconventional forces; during peacetime, the CENTAG rear area is a prime target for espionage and subversion conducted by agents and terrorist groups; certain systems operating/located in the CENTAG rear area are vulnerable to attack and require improved security and tactics in order to enhance their survivability; current U.S. rear area doctrine does not adequately emphasize the threat forces that are likely to be encountered; added emphasis and training is required for units operating in rear areas directed at countering attack by unconventional forces.

618. EXPERT SYSTEMS - TOOLS IN THE COMMANDER'S DECISION-MAKING PROCESS, by Major William A. Teter, USA, 235 pages.

The purpose of this study was to develop a prototype, microcomputer-based, expert system tactical planner as an aid in the decision process at division level and, concurrently, investigate the possible benefits, requirements, and limitations of such a system. The result was the construction of a system called TACTICIAN, which automates the initial allocation of forces done during course of action development using the processes and techniques outlined in USACGSC Student Text 100-9, A Guide to the Estimate of the Situation.

TACTICIAN was constructed on an IBM Personal Computer/AT using a commercially available expert system development package. The expertise and rules used to build the knowledge base were extracted from ST 100-9, FM 100-5, Operations (1986), and FC 71-100, Armored and Mechanized Division and Brigade Operations (1984).

The capabilities of the system were evaluated using two defensive scenarios, one a reinforced U.S. armored division defending against a threat force attacking across the Inter-German border and the second a U.S. mechanized infantry division defending against a threat force on terrain in the central U.S. The resulting solutions generated by the expert system were then analyzed for adequacy and tactical soundness.

The analysis indicated that TACTICIAN could not achieve the performance level of a human expert in tactical planning, especially when there were insufficient defending forces available. It came closest to expert performance in allocating defending units based on required force ratios. Other general conclusions regarding developing expert systems for tactical planning were reached and are discussed along with lessons learned during the construction of TACTICIAN.

619. THE ARAB-ISRAELI CONFLICT: THE WAR OF ATTRITION AND PREPARATIONS PRECEDING THE OCTOBER 1973 WAR. An analysis of Israeli and Egyptian war preparations between the end of the Six-Day War in 1967 and the October War of 1973, by Major Jerry R. Thornberry, USAF, 162 pages.

This study is a historical analysis of two definitive periods of the conflict between Israel and Egypt - the War of Attrition between July 1967 and August 1970, and the period of "No Peace, No War" between August 1970 and 6 October 1973. The study discusses the lessons learned by Egypt and Israel following the Six-Day War. The lessons of the Six-Day War were not lost on the Egyptian leaders. President Nasser's assessment of the military aspects of the war revealed several shortfalls in Egypt's military capabilities and superiorities of Israel's forces which needed modifying before Egypt could successfully mount a campaign against Israel. President Sadat believed Israel's intrasigence on retaining the occupied territories could only be changed by actions which would cause the United States, the Soviet Union, and the United Nations to become involved. Sadat's decision to go to war was a political gamble designed to end the stalemate. Israel's military leaders' constantly underrated the Egyptian's armed forces potentials. Military and political leaders continually misread Nasser's and Sadat's intentions and their resolve to regain the occupied territories.

Among the conclusions which were drawn from this study are: The Egyptians prepared for the October War by correcting their deficiencies in the Six-Day War - restructured the High Command, improved training methods, developed new tactics, incorporated new equipment into the armed forces, constructed a high-density surface-to-air missile system, and neutralized the Israeli superiorities of the air force, mobile ground forces, and rapid

mobilization of reserves. The Israelis prepared by developing a static defense strategy along the Suez Canal.

The study concludes that Egyptian preparations for the October War included recognizing their failures and Israeli strengths and weaknesses of the Six-Day War, then vigorously applying corrective measures, while the Israelis analyzed the weaknesses of the Egyptians and their own strengths after the Six-Day War, then did little to reassess those views, retaining the perception of their strength and the Egyptian weaknesses.

620. VARIABLES IN THE GUATEMALAN OPERATIONAL ENVIRONMENT THAT AFFECT GUATEMALAN DECISION MAKERS CONCERNING RELATIONS WITH THE UNITED STATES, by Major Donald C. Waring, USA, 184 pages.

This study is a historical analysis of variables that affected Guatemalan decision makers concerning their relations with the United States, during the period 1970 to 1985. Each variable is examined, based on the current body of literature, to determine their individual and cumulative effects on the reactions of Guatemalan decision makers to U.S. attempts to influence events in Guatemala.

Six important variables were identified: the Guatemalan interaction in the international community; the Guatemalan interaction in the regional community; the Guatemalan economy, interest groups, internal security, and political structure. The study demonstrates that relations between Guatemala and the United States are best, and U.S. influence in Guatemala is enhanced when: both countries exhibit a western oriented, anti-communist foreign policy; communist influence in Central America is reduced and the region is stable; the Guatemalan economy is weak and dependent upon bilateral U.S. assistance; there are internal interest groups in Guatemala capable of challenging the military elite; the level of fighting between Government forces and communist insurgents is low; and the political structure allows greater pluralism.

The study concludes that there have been changes in the variables that have exerted pressure on Guatemalan decision makers to improve relations with the U.S., however, the Guatemalan political structure has not changed. An understanding of the variables that have changed, and the collective pressure from the variables exerted on Guatemalan decision makers, may assist the U.S. in influencing changes to the Guatemalan political structure.

621. THE SELECTION PROCESS OF U.S. ARMY RECRUITERS: An Analysis of the Selection Process of U.S. Army Recruiters and How this Affects Their Job Motivation and Well-Being, by Major Petter Wendelborg, Norway, 146 pages.

This study was conducted through a structured mail survey to 1,000 recruiters in the U.S. Army in order to obtain information on how they were selected for recruiting and how this selection process affects their job motivation and well-being.

The study presents the current recruitment situation and describes considerations as to the size of the youth population, educational implications, the level of unemployment, and future military requirements. These factors will affect military recruitment to a large degree and point toward an increased future competition in the recruitment arena.

The study demonstrates the importance of personal communication as far exceeding any other medium of communication and emphasizes that the recruiter's own attitudes and emotional well-being are essential to his effectiveness as a communicator and a recruiter.

Among the conclusions which are drawn from this study there is one that the present selection process of screening and selecting recruiters based on their performance is a valid approach. However, a significant improvement could be made if this impersonal selection process was complemented by personal information through the chain of command.

The study also shows a declining level of qualitative information of recruiting duties among Army units and the necessity to create a more positive attitude for this kind of assignment. How recruiters feel about their participation in the selection process and how they receive the local information about their recruiting assignment have significant impact on how they will later feel about being recruiters and, in turn, what information they will provide to potential recruiters.

622. THE ARMY AND SPACE: HISTORICAL PERSPECTIVES ON FUTURE PROSPECTS: An analysis of the Army's early involvement in space to find historical lessons to help guide today's growing Army interest in renewed space operations, by Major John R. Wood, USA, 185 pages.

This study reviews the Army's involvement in the nation's space activities during the late 1950's when the Army went from being the clear leader in space research and operations to a position of relatively minor significance by 1961. The purpose of this analysis is to reveal those forces responsible for the rapid departure of the Army from the space field. Such an analysis is important now since the Army appears ready to dramatically increase its activities in space. Unless Army leaders account for the existence of these same forces today, this service may be destined to repeat past mistakes, refight old battles, and, in the end, find important Army space aspirations frustrated.

The forces identified include inter-service rivalry, national strategy controversy, and political and bureaucratic disputes. Each of these forces is examined and the consequences on the Army detailed. When the final bureaucratic and political battles are waged in 1961, the Army proves willing to trade off most of its space activities to fund much needed conventional force modernization.

The reasons for the renewal of Army interest in space are examined along with the emerging organizational and policy initiatives concerning space undertaken by the Army. In a number of appendices, current Army statements of policy, organizational proposals, and study summaries are presented.

The final chapter contains over 24 conclusions concerning potential problems facing Army leaders as the Army increases its involvement with space activities. These conclusions are all drawn based on historical antecedents and observations of emerging Army space intentions discussed in the thesis.

Overall, the Army can expect opposition when its actions cross perceived or actual boundaries between "accepted" roles and missions in space or threaten the existence of USAF or USN space systems that support "vital" air or sea operations. The Army's strongest bureaucratic position seems to be as spokesman for the space needs of the ground commander fighting at the operational level of war. Only so far as the Army can show space and space systems support the ground attack throughout the operational depth of the battlefield can it expect to have Air Force and Navy support of its space operations. Without this willingness to champion space systems that meet the conventional needs of ground forces, even internal Army support for Army space aspirations is suspect.

623. STRATEGIC AND OPERATIONAL IMPLICATIONS OF IRANIAN MILITARY OPERATIONS IN THE IRAN-IRAQ WAR. An analysis of the modern Iranian Army from Reza Shah to the Iran-Iraq War. Focus is on the effect of the revolution on the Iranian Army's fighting power, by Donald H. Zacherl, USA, 106 pages.

The progress of the Iran-Iraq War has surprised analysts. In order to gain insight into events in the region and their implications, I propose an analytical framework using Carl Von Clausewitz and Martin Van Creveld, which is used to analyze the military worth of the Islamic Iranian Army.

The thesis has three logical steps leading to the eventual conclusion. First, the Imperial Iranian Armed Forces were fundamentally flawed. From its inception under Reza Shah, the people, army, government trinity had fatal cracks throughout. Muhammed Reza Pahlavi, attempting to build on the same structure, increased the pressure on the people, army, government trinity, resulting in a collapse. The weaknesses of this trinity was demonstrated by the patent inability of the army to defeat the revolution in spite, or even because of, the lavish augmentation of equipment.

Second, the Islamic Iranian army proved to have remarkable power and resilience in the Iran-Iraq War. Surprised by a powerful invader, hampered by desertion, eroding equipment, and unreliable logistics, the Iranian Armed Forces resisted the attack and went on the offensive. Actions were characterized by courage and fighting power, excellent staff work, and operational level planning.

Third, the change in the Armed Forces was casually linked to the impact of the Islamic Revolution on the people, army, government trinity. The strong bond between Khomeini and the people, and the new army legitimacy and ethic, had a multiplicative effect on the military capability of the army. The result was an army with resilience, flexibility, and potential for real growth in military power.

The war, paradoxically, has had a stabilizing effect on the Persian Gulf Region. The region now has a viable collective security organization, less vulnerable oil lines of communications, and is carefully watched and guarded by the U.S. However, the war, when it ends, is likely to have a destabilizing effect on Iran's neighbors. Iran has the military growth potential to become the dominant regional power with a capability to challenge the Superpowers for control of the Persian Gulf.

ABSTRACTS
OF
CLASSIFIED THESES

C49. THE 100,000 PRESIDENTIAL CALL-UP: SHOULD IT SOLVE THIS NATION'S INITIAL MOBILIZATION NEEDS? (U) by Major J. C. Dibert, USA, 90 pages.

(U) This is a study of the Presidential Authority to call to active duty, for not more than 90 days, 100,000 (100K) members of the Selected Reserve of the Armed Forces. The study looks at the history of the creation of the 50K in 1976, its doubling in 1980 and to a pending proposal to increase it to 200K in 1986. It looks at the Army, Navy, Air Force and Marine Corps use of the 100K as either a means to provide forces for an operational mission or, in an indirect role, to prepare for a subsequent mobilization. Each service is now depending more on their Selected Reserve to play a larger part of their Total force. This study looks at any effect that increased service dependence on the Selected Reserve could have on a potential operational mission.

(U) Finally, this study shows that Operations Security (OPSEC), the 90-day limit, and Reserve Component readiness are problems that must be addressed by those who consider using the call-up authority. A recommendation to delay the 1986 increase to 200K is made based upon significant improvements needed with the present authority. Most of these improvements center around the definition of an operational mission or the calling of the 100K a real mobilization (if it is ever used in such a way). Although the 100K is not supposed to be planned as a mobilization, all indicators prove otherwise. The 100K is not a level of mobilization and should not be used to solve initial mobilization requirements.

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